

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2005/000479

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: C22C23/02 C22C1/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: C22C1/00-1/06 C22B4/00-4/06 C22C23/00-23/06 C22F1/00 1/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CN-F&amp;T, CNKI

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, EPODOC, CA, magnesium alloy, aluminum, heat treatment, smelting etc.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CN1401804A; 12. Mar. 2003 (12. 03. 2003); description Page 2	1-3
Y	CN1210897A; 17. Mar. 1999 (17. 03. 1999); description Page 4	1-3
A	CN1412332A; 23. Apr. 2003 (23. 04. 2003)	1-8
A	JP2004263280A; 24. Sep. 2004 (24. 09. 2004)	1-8
A	US6471797B1; 29. Oct. 2002 (29. 10. 2002)	1-8
A	Materials for Mechanical Engineering; Vol. 25, No. 11; Nov. 2001; Liuzili et al; "Survey of the Mg-Al Based Elevated temperature Magnesium Casting Alloys"	1-8

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

01. Jul. 2005 (01. 07. 2005)

Date of finalization of the international search report

9. DEC 2005 (29. 12. 2005)

Name and mailing address of the ISA/CN

The State Intellectual Property Office, the P.R.China  
6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China  
100088  
Facsimile No. 86-10-62019451

Authorized officer

WANG Lin

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## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

A cast magnesium alloy and the manufacturing method thereof.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
PCT/CN2005/000479

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN1401804A	12. Mar. 2003 (12. 03. 2003)	None	
CN1210897A	17. Mar. 1999 (17. 03. 1999)	CA2238070C	16. Mar. 2004 (16. 03. 2004)
		EP0879898A1	25. Nov. 1998(25. 11.1998)
		AU6711398A	26. Nov. 1998(26. 11.1998)
		JP10324941A	08. Dec. 1998(08. 12.1998)
		US5855697A	05. Jan. 1999(05.01.1999)
		CA2238070A	21. Nov. 1998(21. 11.1998)
		AU730893B	15. Mar. 2001 (15. 03.2001)
		EP0879898B1	18. Jul. 2001 (18.07.2001)
		DE69801133E	23. Aug. 2001(23. 08. 2001)
		JP3354098B2B2	09. Dec. 2002 (09. 12. 2002)
CN1412332A	23. Apr. 2003 (23. 04. 2003)	None	
JP2004263280A	24. Sep. 2004 (24. 09. 2004)	None	
US6471797B1	29. Oct. 2002 (29. 10. 2002)	AU2002248073A1	28. Oct. 2002 (28. 10. 2002)
		WO02083964A1	24. Oct. 2002 (24. 10. 2002)
		JP2002309332A	23. Oct. 2002 (23. 10. 2002)
		US2003029526A1	13. Feb. 2003 (13. 02. 2003)
		KR2002078936A	19. Oct. 2002 (19. 10. 2002)

國際檢索報告

因阮申請号

PCT/CN2005/000479

A 主題的分美

IPC<sup>7</sup>: C22C23/02 C22C1/02

按照國際昔利分癸表(IPC) 或者同时按照國家分癸和 IPC 丙神分癸

B 檢索領域

檢索的最低限度文楸(枋明分業系統和分癸弓)

IPC<sup>7</sup>: C22C1/00-1/06 C22B4/00-4/06 C22C23/00-23 /06 C22F1/00 1/06

包含在檢索領域中的除最低限度文就以外的檢索文楸

CN-PAT, CNKI

在國際粒索时查閱的唱子數據庫(數據庫的名你, 和使用的檢索嗣(如便用))

WPI, PAJ, EPODOC, CA, 儀合金 magnesium alloy, 館, aluminum, 熟她理, heat treatment, 熔煉 smelting 等。

C. 柏美文件

美 型*	引用文件, 必要时, 指明相夫段落	相美的杖利要求
Y	CN1401804A; 12. 3 月 2003 (12. 03. 2003); 稅明弔第 2 页	1-3
Y	CN1210897A; 17. 3 月 1999 (17. 03. 1999); 槐明弔第 4 頁	1-3
A	CN1412332A; 23. 4 月 2003 (23. 04. 2003)	1-8
A	JP2004263280A; 24. 9 月 2004 (24. 09. 2004)	1-8
A	US6471797B1; 29, 10 月 2002 (29. 10. 2002)	1-8
A	帆械工程材料; 第 25 卷第 3 期; 2001 年 11 月; 刺于利等; “鎂館基耐熟特造鎂合金的进展”	1-8

D 其余文件在 C 柱的銀頁中列出。

☒ 兄同族古利附件。

° 引用文件的具体炎型:

"A" 臥力不特別相夫的表示了孰有技术一般狀惑的文件

"E" 在因阮申請日的当適泛后公布的甜c申龍特利

"L" 可能时仇先杖要求构成怀疑的文件, 或力确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件

"O" 涉及口共公升、使用、展跪或其他方式公升的文件

"P" 公布日先于因阮申請日但退于所要求的仇先杖日的文件

"T" 在申請日或仇先杖日之后公布, 与申請不相抵恤, 但力了理解亥明之理淤或原理的在后文件

"X" 特別相夫的文件, 革拙考虎核文件, 臥定要求保折的友明不是新穎的或不具有创造性

"Y" 特別相夫的文件, 圭核文件与另一篇或者多篇核癸文件錯合非且迭神結合肘于本領域技术人员力思而易兄肘, 要求保扣的友明不具有创造性

"&" 同族肯利的文件

國際粒索突阮完成的日期

01. 7 月 2005 (01. 07. 2005)

國際粒索扳告郵寄日期

29. 12月 2005 (29. 12. 2005)

中年人民共和国因家知洪芒杖局(ISA/C 叨

中 北京市海旋匡創口析西土城路 6 骨 100088

估其肯: (86-10)62019451

受杖官貝

王琳

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國際檢索報告

國際申請號

PCT/CN2005/000479

第II柱 关于某些权利要求不能作力检索主题的意見(接第1頁第2項)

按第17(2Xa)条某些权利要求未作国际检索报告的理由如下:

1. D 权利要求:

因为它们涉及到不要求本国际检索单位进行检索的主题, 即:

2. D 权利要求:

因为它们涉及到国际申请中不符合规定的要求的部分, 以致不能进行任何有意义的国际检索, 具体地说,

3. D 权利要求:

因为它们是从属权利要求, 并且没有按照细则64(a)第2句和第3句的要求撰写。

第III柱 关于缺乏发明单一性的意見(接第1頁第3項)

本国际检索单位在核国际申请中未发现多项发明, 即:

特造镁合金及其制造方法。

i. D 由于申请人按时缴纳了被要求缴纳的全部附加检索费, 本国际检索报告针对全部可作检索的权利要求。

2. 因 由于无需付出有理由要求附加的劳动即能针对全部可检索的权利要求进行检索, 本国际检索单位未通知缴纳任何附加费。

3. ☐ 由于申请人仅按时缴纳了部分被要求缴纳的附加检索费, 本国际检索报告仅涉及已缴纳的那些权利要求。具体地说, 是权利要求:

4. D 申请人未按时缴纳被要求的附加检索费。因此, 本国际检索报告仅涉及权利要求中首先提及的发明; 包含该发明的权利要求是:

权利要求的说明: D 申请人缴纳了附加检索费, 同时提交了异以弔, 缴纳了异汲典。

☐ 申请人缴纳了附加检索费, 同时提交了异汶弔, 但未缴纳异以突。

D 缴纳附加检索费时未提交异汶榴。

国际检索报告  
关于同族专利的信息

国际申请号

PCT/CN2005/000479

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
CN1401804A	12. 3 月 2003 (12. 03. 2003)	无	
CN1210897A	17. 3 月 1999 (17. 03. 1999)	CA2238070C	16. 3 E 2004 (16. 03. 2004)
		EP0879898A1	25. 11 E 1998 (25. 11. 1998)
		AU6711398A	26. 11 E 1998 (26. 11. 1998)
		JP10324941A	08. 12 E 1998 (08. 12. 1998)
		US5855697A	05. 1 E 1999 (05. 01. 1999)
		CA2238070A	21. 11 E 1998 (21. 11. 1998)
		AU730893B	15. 3 月 2001 (15. 03. 2001)
		EP0879898B1	18. 7 月 2001 (18. 07. 2001)
		DE69801133E	23. 8 E 2001 (23. 08. 2001)
		JP3354098B2B2	09. 12 E 2002 (09. 12. 2002)
CN1412332A	23. 4 月 2003 (23. 04. 2003)	55	
JP2004263280A	24. 9 月 2004 (24. 09. 2004)	55	
US6471797B1	29. 10 月 2002 (29. 10. 2002)	AU2002248073A1	28. 10 E 2002 (28. 10. 2002)
		WO02083964A1	24. 10 E 2002 (24. 10. 2002)
		JP2002309332A	23. 10 月 2002 (23. 10. 2002)
		US2003029526A1	13. 2 E 2003 (13. 02. 2003)
		KR2002078936A	19. 10 E 2002 (19. 10. 2002)